

## ORAL CONTRIBUTIONS

**838 Outcomes Research: Old Treatments, New Insights**

Tuesday, March 09, 2004, 10:30 a.m.-Noon  
Morial Convention Center, Room 265

10:30 a.m.

**838-1****National Patterns of Spironolactone Prescription for Older Patients With Heart Failure and Left Ventricular Systolic Dysfunction Before and After RALES**

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**Background:** In the RALES trial, published in September 1999, spironolactone improved survival in selected patients with heart failure and left ventricular systolic dysfunction (LVSD). Because of the risk of hyperkalemia, however, guidelines advise against use in patients with  $K \geq 5.0$  mmol/l or creatinine  $\geq 2.5$  mg/dl.

**Methods:** Using data from the Centers for Medicare and Medicaid Services' National Heart Care Project, we studied Medicare patients  $\geq 65$  years old with LVSD discharged after hospitalization for heart failure in two time periods: 4/1998–3/1999 (before RALES  $n = 9,758$ ) or 7/2000–6/2001 (after RALES,  $n = 9,468$ ). We assessed changes in rates of spironolactone prescription at discharge between periods in all patients and in strata according to potassium and creatinine levels.

**Results:** Spironolactone prescriptions increased more than seven-fold between the two samples (Table). Although prescription rates were higher in patients with creatinine  $< 2.5$  mg/dl, proportions of patients receiving spironolactone increased significantly in both creatinine strata. Rates were similar in patients with normal potassium and those with relative hyperkalemia.

**Conclusions:** Spironolactone use nationwide increased markedly after the publication of the RALES trial among older patients hospitalized with heart failure and LVSD. This use, however, has extended to patients who are at a high risk for adverse outcomes. Current patterns of practice may pose hazards to the safety of some patients.

	Rate before RALES (n)	Rate after RALES (n)	p
Total	3.0% (9,758)	21.3% (9,468)	<0.0001
Creatinine <2.5 mg/dL	3.1% (8,933)	22.0% (8,592)	<0.0001
Creatinine $\geq 2.5$ mg/dL	1.9% (825)	14.1% (876)	<0.0001
K <5.0 mmol/dL	3.0% (9,267)	21.2% (8,938)	<0.0001
K $\geq 5.0$ mmol/dL	2.7% (491)	22.8% (530)	<0.0001

10:45 a.m.

**838-2****Rofecoxib Increases Cardiovascular Events in Arthritis Patients but Celecoxib and Nonspecific Nonsteroidal Anti-Inflammatory Drugs Do Not: Results From a Large New England Health Care Claims Database**

Andrew Whelton, William M. Spalding, William B. White, Matthew J. Reeves, Sandy S. Suh, John G. Fort, Universal Clinical Research Center Inc, Hunt Valley, MD

**Background:** Treatment with cyclooxygenase-2 (COX-2) specific inhibitors may lead to adverse cardiovascular (CV) events.

**Objective:** Determine relative risk (RR) of acute MI (AMI) or stroke associated with the COX-2 specific inhibitors celecoxib and rofecoxib, and nonspecific NSAIDs in treated hypertensive patients with osteoarthritis (OA) and/or rheumatoid arthritis (RA) in a large New England healthcare claims database.

**Methods:** Population based retrospective analysis of  $>3$  million patients aged  $\geq 18$  years enrolled in a private medical insurance plan in the New England region of the US, from January 1, 1999 - June 30, 2001. Enrollment, medical claims data and pharmacy claim records were computer linked. NSAID and COX-2 specific users were identified using NDC codes. Outcomes of interest were identified by ICD-9-CM codes 410-414 (AMI) or 430-436 (stroke). Sub-group analysis included prostaglandin-mediated antihypertensives (ACEI, ARB,  $\beta$ -blocker). The incidence of CV events was estimated using Cox proportional hazard time-to-event models adjusted for CV risk factors.

**Results:** RR for CV events with rofecoxib vs nonusers of NSAIDs was 2.45. No differences in RR were noted for celecoxib vs NSAIDs ( $p = 0.40$ ) or nonusers ( $p = 0.06$ ) and NSAIDs vs non-users ( $p = 0.59$ ).

Treated Hypertensive Patients*	Non-users N=1798	Celecoxib N=1288	Rofecoxib N=841	NSAIDs N=1594
Years of exposure	3612.7	982.1	453.6	938.1
Relative Risk	1.00 (Reference)	1.35 (0.98, 1.86) ( $p = 0.06$ )	2.45 (1.71, 3.51) ( $p < 0.0001$ )	1.11 (0.74, 1.67) ( $p = 0.59$ )
Sub-Group ACE-I, ARB, $\beta$ -Beta Blockers	1.00 (Reference)	1.30 (0.90, 1.88) ( $p = 0.17$ )	2.18 (1.41, 3.36) ( $p = 0.0004$ )	0.91 (0.55, 1.50) ( $p = 0.72$ )

\* Adjusted for CV risk factors.

**Conclusions:** Rofecoxib significantly increases risk of AMI or stroke in treated hypertensive patients with OA or RA compared with nonusers. Patients receiving celecoxib, nonspecific NSAIDs, ACEI, ARB or  $\beta$ -blockers are at no enhanced risk.

11:00 a.m.

**838-3****Safety and Efficacy of Glycoprotein IIb/IIIa Receptor Blockers in Patients With Chronic Renal Insufficiency Undergoing Contemporary Percutaneous Coronary Intervention**

Mauro Moscucci, Dean E. Smith, Arthur Riba, Raj Goswami, Anthony DeFranco, Sanjaya Khanal, Michael O'Donnell, David Share, Kim A. Eagle, For the Blue Cross Blue Shield of Michigan Cardiovascular Consortium, University of Michigan, Ann Arbor, MI

**Background:** Chronic renal insufficiency (CRI) has been an exclusion criteria in clinical trials of glycoprotein (Gp) IIb/IIIa receptor blockers. The objective of our study was to evaluate safety and efficacy of GpIIb/IIIa blockers in patients with CRI undergoing contemporary percutaneous coronary intervention (PCI).

**Methods:** Data on 48,851 PCIs were collected in a regional consortium between 7/1997 and 5/2003. CRI was defined as baseline creatinine  $\geq 2$  mg/dl. Patients with CRI receiving GpIIb/IIIa blockers ( $n = 880$ ) were compared with patients who did not ( $n = 793$ ). End-points analyzed included hospital death, bleeding, and a composite major adverse cardiac event (MACE) of death, emergency CABG, stroke and myocardial infarction (MI). Bleeding was defined as any blood transfusion (tx) regardless the number of units.

**Results:** Patients receiving GpIIb/IIIa blockers were more likely to undergo emergency PCI, and to undergo PCI for acute MI, shock and complex coronary stenosis (Table). After adjustment for comorbidities, GpIIb/IIIa blockers were associated with a 36% risk reduction of MACE (adjusted OR 0.64, 95% CI 0.43-0.96,  $p = 0.03$ ). No significant effect was observed on mortality (adjusted OR 0.99, 95% CI 0.60-1.62,  $p = 0.9$ ) and tx (adjusted OR 1.13, 95% CI 0.84-1.51,  $p = 0.4$ ).

**Conclusions:** PCI in patients with CRI continues to be associated with high in-hospital morbidity and mortality. GpIIb/IIIa blockers in this patient population result in a significant reduction in MACE without an increase in bleeding.

Variable (%)	GpIIb/IIIa yes (880)	GpIIb/IIIa no (793)	p - value
Age	66.6	67.2	0.33
Female sex	33.6	41.1	0.002
PVD %	42.7	44.4	0.49
Type C Lesion	28.6	19.2	<0.001
Visible Thrombus	25.6	15.0	<0.001
Emergency Procedure	20.2	14.5	0.002
Acute MI	17.3	11.7	0.001
Cardiac Arrest	6.1	4.8	0.23
Cardiogenic shock	6.7	5.8	0.45
Outcomes			
In-hospital mortality	6.9	6.4	0.68
MACE	9.2	10.7	0.30
Transfusion	18.6	17.2	0.47

11:15 a.m.

**838-4****National Evaluation of Long-Term Adherence to Beta-Blocker Therapy After Acute Myocardial Infarction in Patients With Commercial Health Insurance**

Judith M. Kramer, Donald Fetterolf, John P. Charde, Richard Snyder, Daniel Checkman, Elizabeth DeLong, Nancy Allen LaPointe, Barbara Hoffman, Rhonda L. Arrington, Eric Peterson, Duke Clinical Research Institute, Durham, NC

**Background:** Despite a Class IA guideline recommendation for chronic use of beta-blockers after acute myocardial infarction (MI), few studies have evaluated long-term adherence to beta-blocker therapy after MI in a population with commercial insurance.

**Methods:** Using pharmacy claims data, nine health plans that are members of the Council for Affordable Quality Healthcare (CAQH) performed a retrospective analysis of one-year survivors of MI to measure cumulative population adherence to beta-blockers for 3, 6, 9, and 12 months after MI. Patients with MI in year 2000 were identified; beta-blocker claims were determined for the subsequent 12 months. Health plans used common tech-